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**(54) COMPOSITE CATALYST FOR EXHAUST GAS TREATMENT**

**(57) Abstract:**

**PROBLEM TO BE SOLVED:** To provide a composite catalyst for exhaust gas treatment capable of keeping a high NOx removal efficiency at a lean air/fuel ratio even after being exposed to hydrothermal environments.

**SOLUTION:** This composite catalyst for exhaust gas treatment is composed of a NOx selective reduction catalyst CA1 containing a gallosilicate having mole ratio  $100 \leq M = \text{SiO}_2/\text{Ga}_2\text{O}_3 \leq 1230$  bearing Pt and CeO<sub>2</sub> and a NOx adsorptive catalyst CA2 for removing NOx which is not removed by the NOx selective reduction catalyst CA1. In the NOx selective reduction catalyst, Pt is a metal for a catalyst and has oxidative and reductive capability to an exhaust gas, CeO<sub>2</sub> has NOx adsorptive capability in a lean state. The gallosilicate with the defined mole ratio M has a function of adsorbing and concentrating HC in the exhaust gas in a lean state and supplying the HC to Pt and is provided with durability in hydrothermal environments and consequently Pt can be prevented from being buried

in fine pores attributed to clogging of the fine pores and Ga isolation from the skeleton can significantly be suppressed and deterioration of the function of CeO<sub>2</sub> owing to isolated Ga can be avoided.

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